ISO

ISO/IEC 17025

ISO/IEC 17025

General requirements
for the competence of testing
and calibration laboratories

ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories*, is the international reference for testing and calibration laboratories wanting to demonstrate their capacity to deliver reliable results.

ISO/IEC 17025......

A new version of the standard was published by ISO and the International Electrotechnical Commission (IEC) in 2017 to update its content and better serve the laboratories that use it.

ISO/IEC 17025 was developed by laboratory experts from all over the world, along with 18 liaison organizations, such as the International Laboratory Accreditation Cooperation (ILAC), and many associations representing laboratories.

What **benefits** will it bring to my business or organization?..............

ISO/IEC 17025 enables laboratories to demonstrate that they operate competently and generate valid results, thereby promoting confidence in their work both nationally and around the world.

It also helps facilitate cooperation between laboratories and other bodies by generating wider acceptance of results between countries. Test reports and certificates can be accepted from one country to another without the need for further testing, which, in turn, improves international trade.

Who is
ISO/IEC 17025 for?........

ISO/IEC 17025 is useful for any organization that performs testing, sampling or calibration and wants reliable results. This includes all types of laboratories, whether they be owned and operated by government, industry or, in fact, any other organization.

The standard is also useful to universities, research centres, governments, regulators, inspection bodies, product certification organizations and other conformity assessment bodies with the need to do testing, sampling or calibration.

Why was it **revised**?........

The last version of ISO/IEC 17025 was published in 2005 and, since then, market conditions and technology have changed. The new version covers technical changes, vocabulary and developments in IT techniques. It also takes into consideration the latest version of ISO 9001.

What are the
key changes ?...........

ISO/IEC 17025 takes into consideration the new ways of working of laboratories today. The most substantive changes are as follows :

- The **scope** has been revised to cover all laboratory activities, including testing, calibration and the sampling associated with subsequent calibration and testing.

- A **new structure** has been adopted to align the standard with the other existing ISO/IEC conformity assessment standards such as the ISO/IEC 17000 series on conformity assessment.

- The **process approach** now matches that of newer standards such as ISO 9001 (quality management), ISO 15189 (quality of medical laboratories) and the ISO/IEC 17000 series (standards for conformity assessment activities), putting the emphasis on the results of a process instead of the detailed description of its tasks and steps.

- The standard has a **stronger focus on information technologies**. In recognition of the fact that hard-copy manuals, records and reports are slowly being phased out in favour of electronic versions, it incorporates the use of computer systems, electronic records and the production of electronic results and reports.

- A new section has been added introducing the concept of **risk-based thinking** and describes the commonalities with the new version of ISO 9001:2015, *Quality management systems – Requirements*.

- The **terminology** has been updated. Examples include changes to the International Vocabulary of Metrology (VIM) and alignment with ISO/IEC terminology, which has a set of common terms and definitions for all standards dedicated to conformity assessment.

Find out **more**

Learn more about ISO/IEC 17025 and the ISO Committee for conformity assessment (CASCO), the technical committee that developed the standard, at **www.iso.org/casco**.

More **information**

- ISO Website
  www.iso.org
- *ISOfocus* magazine
  www.iso.org/isofocus
- ISO videos
  www.iso.org/youtube
- Follow us on Twitter
  www.iso.org/twitter
- Join us on Facebook
  www.iso.org/facebook
- Join us on GooglePlus
  www.iso.org/gplus

About **ISO**

ISO (International Organization for Standardization) is an independent, non-governmental organization with a membership of 162* national standards bodies. Through its members, ISO brings together experts to share knowledge and develop voluntary, consensus-based, market-relevant International Standards that support innovation and provide solutions to global challenges.

ISO has published more than 21 500* International Standards and related documents, covering almost every industry, from technology to food safety, to agriculture and healthcare. For more information, please visit **www.iso.org**.

*October 2017

International Organization for Standardization

ISO Central Secretariat
Ch. de Blandonnet 8
Case Postale 401
CH – 1214 Vernier, Geneva
Switzerland

iso.org